

Curriculum Vitae

Name: Gamal Mohamed Mahmoud El Maghraby

Date of birth: 1/1/1967.

Sex: Male.

Nationality: Egyptian.

Marital status: Married



Occupation: Associate professor of Pharmaceutics, College of Pharmacy, King Saud University, Riyadh, Saudi Arabia.

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Qualifications:

Ph.D. in Pharmaceutical Technology, 2000, (School of Pharmacy, University of Bradford, Bradford, UK). The main thesis title was, “NEW DRUG DELIVERY SYSTEMS THROUGH LIPOSOMES” and the subtitle was “*investigation of deformable and traditional liposomes as potential skin delivery systems for model drugs; human skin permeation, mechanistic and high sensitivity differential scanning calorimetric studies*”.

M.Sc. in Pharmaceutical Technology, 1995 (Faculty of Pharmacy, University of Tanta, Tanta, Egypt). The thesis title was “STABILITY STUDIES OF RANITIDINE IN VARIOUS DOSAGE FORMS”.

B.Sc. in pharmacy, 1989, with a general grade of very good with honor (Faculty of Pharmacy, University of Tanta, Tanta, Egypt).

Positions Occupied:

10/7/2010- Present: Associate professor of Pharmaceutical Technology, College of Pharmacy, University of Tanta, Tanta, Egypt.

14/9/2010-Present: Deputy Head of the Quality Assurance Unit, College of Pharmacy, University of Tanta, Tanta, Egypt.

1/2/2006-9/7/2010: Assistant/Associate professor of Pharmaceutics, College of Pharmacy, King Saud University, Riyadh, Saudi Arabia.

22/2/2005-31/1/2006: Lecturer of pharmaceutics, The school of Pharmacy, Faculty of Medical and Health sciences, The university of Auckland, Private bag 92019, Auckland, New Zealand

28/1/2001-21/2/2005: Lecturer of Pharmaceutical Technology, Faculty of Pharmacy, University of Tanta, Tanta, Egypt. This involved teaching, pharmaceutics, Physical pharmacy, biopharmaceutics, pharmaceutical formulations industrial pharmacy and hospital pharmacy for the undergraduate students. In addition, I am teaching advanced physical pharmacy, advanced pharmaceutical formulations, pharmaceutical engineering, GMP and hospital pharmacy for the master students.

3/4/2001-15/7/2001: I have occupied a postdoctoral position, department of pharmaceutics, Victorian College of Pharmacy, University of Monash, Victoria, Australia. During this period I have performed some research on the mechanism of action of novel skin penetration enhancers. This employed a high sensitivity DSC.

1/7/1996-19/6/2000: Governmental scholarship to study the Ph.D. in the UK, drug delivery group, postgraduate studies in pharmaceutical technology, the school of pharmacy, university of Bradford, Bradford, West Yorkshire, United Kingdom.

20/6/2000-27/1/2001: Back to my assistant lecturer position, department of pharmaceutical technology, faculty of pharmacy, university of Tanta, Tanta, Egypt.

1/12/1990-30/6/1996: Academic Staff (demonstrator/assistant lecturer), department of pharmaceutical technology, faculty of pharmacy, university of Tanta, Tanta, Egypt. The job involved teaching the practical classes of physical pharmacy, Pharmaceutics, biopharmaceutics, pharmaceutical formulations, industrial pharmacy and Cosmetics.

18/10/1989-30/11/1990: Hospital pharmacist in Matrooh military hospital, Egypt (military service).

1/6/1989-17/10/1989: Community pharmacist.

Additional teaching experience:

During 2002/2003, I have been involved in the program of pharmacy continuing education for hospital pharmacist.

Throughout 2002-2004, I was a visiting lecturer (once a week) to Misr International University to teach The Design and Formulation of dosage forms course and the reaction kinetics and drug stability course for the fourth year pharmacy students.

During 1999 I was demonstrating the microbiology labs (3 hours weekly), school of pharmacy, university of Bradford, Bradford, UK.

Research interests:

- 1- Formulation, characterization and evaluation of liposomes, niosomes, nanoemulsion and other colloidal drug delivery systems.
- 2- Evaluation and enhancement of dermal and transdermal absorption of drugs using chemical enhancers and colloidal drug delivery systems.
- 3- Application of differential scanning calorimetry to study the mechanisms of improved skin delivery of drugs after application of penetration enhancers or vesicular delivery carriers. This uses phospholipids liposomes or vesicles prepared from the stratum corneum lipids as model membrane. The technique was also employed to study drug interaction with biological membrane.

- 4- Investigation of oral absorption of drugs in situ and in vivo in rabbits and in vivo in humans.
- 5- Enhancement of oral absorption of drugs.
- 6- Enhancement of ocular absorption of drugs
- 7- Evaluation of absorption and pharmacokinetic interactions of drugs.
- 8- Solubilization and stabilization of drugs.
- 9- Performing bioequivalence studies.

Postgraduate supervision experience

I am supervising research projects for master/Ph.D. students. These include:

- 1- Investigation of sildenafil citrate interactions with ciprofloxacin and clarithromycin (Thesis completed and the student passed the exam).
- 2- Development and evaluation of niosomes for ocular drug delivery (Thesis completed and the student passed the exam).
- 3- Development and evaluation of chronotherapeutic drug delivery system for treatment of pain.
- 4- Development and evaluation of liquid oral controlled release formulations (To be submitted for examination this semester).
- 5- Optimization of nanoemulsions for transdermal drug delivery.
- 6- A study to investigate the effect of a nanosystem on the dissolution characteristics of selected class II drug(s).
- 7- Development and evaluation of colloidal particles for transdermal drug delivery.

Grants and scholarships

- 1- Egyptian governmental scholarship to study the PhD in England (1996-2000).
- 2- Postdoctoral fellowship, Victorian College of Pharmacy, University of Monash, Victoria, Australia (2001).
- 3- Research grant (18000 S.R) from the research center, college of pharmacy, King Saud University Project title: optimization of transdermal delivery of tadalafil (2006).

- 4- Research grant (36000 S.R) from the research center, college of pharmacy, King Saud University. Project title: optimization of colloidal drug delivery for oral drug delivery (2007).
- 5- Research grant (1,538,000 S.R) from the Center of Excellence in Biotechnology, King Saud University. Project title: Production and site specific delivery of bleomycin (2008).
- 6- Research grant (1,050,000 S.R) from the National plan for Science and Technology, King Saud University. Project title: Optimization of nanoemulsion and self nanoemulsifying drug delivery systems for oral drug delivery (2009).

Publications:

(A) Published articles:

- Alomrani, A.H., El Maghraby, G.M., Alanazi, F.K., Al-Mohanna, M.A., Alaiya, A.A., Alsarra, I.A. (2010).** Liposomes for Enhanced Cytotoxic Activity of Bleomycin: Effect of composition. *Drug Develop. Res.* (In Press).
- El Maghraby, G.M., Al Omrani, A.H. (2010).** Effects of hydroxypropyl- β -cyclodextrin, gel and in-situ gelling systems on the stability of hydrocortisone after gamma irradiation. *New Drug Deliv. Sci. Technol.* (In Press).
- El Maghraby, G.M. Bosela A.A. (2010).** Investigation of self microemulsifying and microemulsion systems for protection of prednisolone from gamma radiation. *Pharm. Devel. Technol.* In Press
- El Maghraby, G.M. (2010).** Self microemulsifying and microemulsion systems for transdermal delivery of indomethacin: Effect of phase transition. *Colloids and Surfaces B: Biointerfaces.* 75: 595-600.
- El Maghraby, G.M., Al Omrani, A.H. (2009).** Synergistic enhancement of itraconazole dissolution by ternary system formation with pluronic F68 and hydroxypropylmethylcellulose. *Scientia Pharmaceutica.* 77: 401-417.
- El Maghraby, G.M., Williams, A.C. (2009).** Vesicular systems for delivering conventional small organic molecules and larger macromolecules to and through human skin. *Expert Opinion in Drug Delivery.*6(2): 149-163.

- El Maghraby, G.M., Alanazi, K.F., Alsarra, I.A. (2009).** Transdermal delivery of tadalafil: 1- effect of vehicle on skin permeation. *Drug Dev. Ind. Pharm.* 35: 329-336.
- Alsarra, I.A., Hamed, A.Y., Mahrous, G.M., El Maghraby, G.M., Al-Robayan, A.A., Alanazi, F.K. (2009).** Mucoadhesive polymeric hydrogels for nasal delivery of acyclovir. *Drug Develop. Ind. Pharm.* 35: 352-362.
- El Maghraby, G.M., Barry B.W., Williams, A.C. (2008).** Liposomes and skin: from drug delivery to model membranes. *Eur. J. Pharm Sci.* 34: 203-222.
- El Maghraby, G.M. (2008).** Transdermal delivery of hydrocortisone from eucalyptus oil microemulsion: effects of cosurfactants. *Int. J. Pharm.* 355: 285-292.
- Chan J., El Maghraby, G.M.M., Craig, J.P., Alany R.G. (2008).** Effect of phase transition water-in-oil microemulsions on the precorneal tear film of albino New Zealand rabbits. *Clinical Ophthalmology*, 2 (1): 1-9.
- Chan J., El Maghraby, G.M.M., Craig, J.P., Alany R.G. (2007).** Ocular delivery of pilocarpine hydrochloride from phase transition microemulsions: In vitro in vivo evaluation. *Int. J. Pharm.*, 328(1): 65-71.
- El Maghraby, G.M.M., Williams, A.C. and Barry, B.W (2006).** Can Drug bearing liposomes penetrate intact skin? *J. Pharm. Pharmacol.*, 58(4): 415-429.
- Osman, M.A., El Maghraby, G.M., and Hedaya, M.A. (2006).** Intestinal absorption and pre-systemic disposition of sildenafil citrate in the rabbit: evidence for site-dependent absorptive clearance. *Biopharm. Drug Dispos.* 27(2): 93-102.
- Hedaya, M.A., El-Afify, D.R., and El-Maghraby, G.M. (2006).** The effect of ciprofloxacin and clarithromycin on sildenafil oral bioavailability in human volunteers. *Biopharm. Drug Dispos.* 27(2): 103-110.
- El-Maghraby, G.M. (2006).** Effect of fatty acid side chain of Span on transdermal delivery of naproxen from Span containing niosomes. *The scientific Journal of Al-Azhar medical Faculty* 27(3): 1357-1367.
- El-Maghraby, G.M. (2006).** Transdermal delivery of naproxen from enhanced niosomes. *The scientific Journal of Al-Azhar medical Faculty* 27(3): 1369-1382.

- El Maghraby, G.M.M., Campbell, M. and Finnin, B. (2005).** Mechanism of action of novel skin penetration enhancers: phospholipid versus skin lipid liposomes. *Int. J. Pharm.*, **305**: 90-104.
- El Maghraby, G.M.M., Williams, A.C. and Barry, B.W (2005).** Drug interaction and location in liposomes: Correlation with polar surface area. *Int. J. Pharm.*, **292**: 179-185.
- El Maghraby, G.M.M., Williams, A.C. and Barry, B.W. (2004).** Interactions of surfactants (edge activators) and skin penetration enhancers with liposomes. *Int. J. Pharm.*, **276 (1-2)**: 143-161.
- Osman, M.A., El Maghraby, G.M.M. and Hedaya, M.A. (2004).** Investigation of polar surface area as a novel parameter affecting oral bioavailability of drugs. *Bull. Pharm. Sci. Assiut University*, **27 (2)**: 223-235.
- Abo- Kamer, A.M., N.I. Aglan, El Maghraby, G.M. and Nassar, S.O. (2004).** Effects of ascorbic acid and pimecrolimus (Elidel[®]) on the activity of some antifungal agents against multiple resistant clinical candida albicans isolates from vulvovaginal and skin candidiasis. *N.Egypt. J. Microbiol.* **9**: 206-220.
- El Maghraby, G.M.M., Williams, A.C. and Barry, B.W.(2001).** Skin delivery of 5-Fluorouracil from ultradeformable and traditional liposomes in vitro. *J. Pharm. Pharmacol.* **53**: 1069-1077.
- El Maghraby, G.M.M., Williams, A.C. and Barry, B.W.(2001).** Skin hydration and shunt route penetration in controlled estradiol delivery from ultradeformable and standard liposomes. *J. Pharm. Pharmacol.* **53**: 1311-1322.
- El Maghraby, G.M.M., Williams, A.C. and Barry, B.W.(2000).** Oestradiol skin delivery from ultradeformable liposomes: refinement of surfactant concentration. *Int. J. Pharm.* **196**: 63-74.
- El Maghraby, G.M.M., Williams, A.C. and Barry, B.W.(2000).** Skin delivery of oestradiol from lipid vesicles: Importance of liposome structure. *Int. J. Pharm.* **204**: 159-169.
- El Maghraby, G.M.M., Williams, A.C. and Barry, B.W.(1999).** Skin delivery of oestradiol from deformable and traditional liposomes: Mechanistic studies. *J. Pharm. Pharmacol.* **51**: 1123-1134.

El Maghraby, G.M.M., Williams, A.C. and Barry, B.W.(1999). Optimisation of deformable vesicles for epidermal delivery of oestradiol. *Pharmacy Research Bulletin, University of Bradford*. **6**: 41-44.

Book Chapter

ALANY, R.G., El Maghraby, G. M. M., Krauel-goellner, K., Graf, A. (2009). Microemulsion Systems and Their Potential as Drug Carriers In Monzer Fanun (ed.), *Microemulsions: Properties and Applications*, Surfactant Science Series by Taylor and Francis / CRC Press, Chapter 9, p. 247-291.

Alsarra, I.A., Hamed, A.Y., Alanazi, F.K., El Maghraby, G.M. (2010). Vesicular Systems for Intranasal Drug Delivery. In: K.K. Jain (ed.), *Drug Delivery to the Central Nervous System*, *Neuromethods* 45, DOI 10.1007/978-1-60761-529-3_8, © Humana Press, a part of Springer Science+Business Media, LLC 2010.

El Maghraby, G.M. (2010). Vesicles and skin: From surface to systemic effects. In F., Colombous (Ed.), *Skin Physiology*. Nova Science, USA. (In Press).

Communications (Conference presentations published as supplement or as proceedings):

El Maghraby, G.M. Alomrani, A.H., Badr-Eldin, O.M. (2010). Transdermal delivery of betamethasone from nanoemulsion: Effect of oil on skin penetration. Poster presentation at *the 8th International Saudi Pharmaceutical Conference*, Riyadh, 25-28 April, 2010.

El Maghraby, G.M., Al Ateeq, N., Al-Jenoobi (2010). Optimization of niosomes for ocular delivery of pilocarpine. Poster presentation at *the 8th International Saudi Pharmaceutical Conference*, Riyadh, 25-28 April, 2010.

El Maghraby, G.M. Alomrani, A.H. (2010). Enhancement of dissolution of gliclazide. Poster presentation at *the 8th International Saudi Pharmaceutical Conference*, Riyadh, 25-28 April, 2010.

- El Maghraby, G.M., Al Ateeq, N., Al-Jenoobi (2009).** Niosomes in in-situ gelling systems for ocular delivery of pilocarpine hydrochloride. *69th International Congress of FIP*. Istanbul, 3-8 September 2009.
- Fars Alanazi, Gamal M. El Maghraby, Ibrahim Alsarra (2007).** A stability indicating high-performance liquid chromatographic method for determination of tadalafil. Poster presentation at *the 7th International Saudi Pharmaceutical Conference*, Riyadh, 19-21 April, 2007.
- El Maghraby, G.M.M. (2005).** Transdermal delivery of naproxen from enhanced niosomes. Poster presentation at *the 65th FIP annual Conference*, Cairo, 5-8 September, 2005. Abstract book P. 137.
- El Maghraby, G.M.M., Campbell, M. and Finnin, B. (2004).** Mechanism of action of novel skin penetration enhancers: phospholipid versus skin lipid liposomes. Poster presentation at *the 29th Conference of Pharmaceutical Sciences and VIII Conference of The Colleges of Pharmacy in the Arab World*, Air Defense House, Cairo, December, 2004. Abstract book P. 114.
- Hedaya, M.A., El-Afify, D.R., and El-Maghraby, G.M. (2004).** The effect of ciprofloxacin and clarithromycin on sildenafil oral Bioavailability IN Human volunteers. Poster presentation at *the 29th Conference of Pharmaceutical Sciences and VIII Conference of The Colleges of Pharmacy in the Arab World*, Air Defense House, Cairo, December, 2004. Abstract book P. 82.
- Osman, M.A., El Maghraby, G.M. and Hedaya, M.A. (2004).** Investigation of polar surface area as a novel parameter affecting oral bioavailability of drugs. Poster presentation at *Assiut University fourth Pharmaceutical Sciences Conference*, March, 2004.
- Osman, M.A., El Maghraby, G.M. and Hedaya, M.A. (2003).** Intestinal absorption of sildenafil citrate in the rabbit: evidence for site-dependent absorptive clearance. Poster presentation at *Al-Azhar Third International Conference for Pharmaceutical and Biological Sciences*, Dec., 2003., Abstract book P. 97.

- El Maghraby, G.M.M., Osman, M.A. and Fouda, M. (2002).** Transdermal delivery of prednisone from proniosomes. Poster presentation at *Assiut University Third Pharmaceutical Sciences Conference*, March, 2002, Abstract book P 28.
- El Maghraby, G.M.M., Williams, A.C. and Barry, B.W. (2000).** In vitro skin delivery of 5-fluorouracil from ultradeformable vesicles. Poster presentation at the seventh International Conference on Perspectives in Percutaneous Penetration, La Grande Motte, France, April, 2000, In Brain, K.R. and Walters, K.A. (eds.), *Perspectives in Percutaneous Penetration*, Volume 7a (Volume 7b, in press).
- El Maghraby, G.M.M., Williams, A.C. and Barry, B.W. (2000).** Penetration enhancers in liposomes for skin delivery of oestradiol. Can they replace surfactants? Poster presentation at the seventh International Conference on Perspectives in Percutaneous Penetration, La Grande Motte, France, April, 2000, In Brain, K.R. and Walters, K.A. (eds.), *Perspectives in Percutaneous Penetration*, Volume 7a (Volume 7b, in press).
- El Maghraby, G.M.M., Williams, A.C. and Barry, B.W. (1998).** Barry. Skin delivery of oestradiol from deformable vesicles and traditional liposomes. Poster presentation at the AAPS Annual Meeting, San Francisco, CA, USA, November, 1998, *Pharm. Sci.* **1(Suppl.):** 525.
- El Maghraby, G.M.M., Williams, A.C. and Barry, B.W. (1998).** Optimization of deformable vesicles for epidermal delivery of oestradiol, Poster presentation at the 135th British Pharmaceutical Conference, Eastbourne, 1998, *J. Pharm. Pharmacol.* **50(Suppl.):** 146.
- El Maghraby, G.M.M., Williams, A.C. and Barry, B.W. (1998).** Mechanistic studies of improved oestradiol skin delivery from different lipid vesicles, Poster presentation at the sixth International Conference on Perspectives in Percutaneous Penetration, Leiden, The Netherlands, September, 1998, In Brain, K.R. and Walters, K.A. (eds.), *Perspectives in Percutaneous Penetration*, Volume 6a, P. 41. (Volume 6b, in press).

Industrial experience:

A- Throughout 2001-Feb., 2005, I was one of the principal investigators of the Pharmaceutical service center, faculty of pharmacy, university of Tanta, Tanta, Egypt. This position involves supervising the bioequivalence studies performed for dosage forms produced by major drug companies in Egypt.

Examples of the investigations performed under my supervision:

- 1- Bioequivalence of sildenafil citrate tablets.
- 2- Bioequivalence of frusemide tablets.
- 3- Bioequivalence of cefixim capsules.
- 4- Bioequivalence of cefixim oral suspension.

B- Consultation work on formulation design for Biopharm Drug Company.

Techniques used

I have good experience with the following instrumental techniques:

- 1- Different spectroscopic methods of analysis.
- 2- High performance liquid chromatography.
- 3- Liquid scintillation counting.
- 4- Photon correlation spectroscopy.
- 5- Differential scanning calorimetry (solid DSC and High sensitivity DSC).
- 6- Automatic and manual diffusion apparatus for skin permeation experiments.

Academic and scientific activities

A- Editorial board member of the International Journal of Drug Delivery. (2009-Present)

B- Advisory board member, Saudi Pharmaceutical Journal. (2006-Present).

C-Reviewer for the following scientific journals:

- 1- International journal of Pharmaceutics.

- 2- Saudi Pharmaceutical Journal.
- 3- Current drug delivery.
- 4- Expert Opinion in Drug Delivery.
- 5- European Journal of Dermatology.
- 6- AAPS Journal.
- 7- AAPS PharmSci Tech.
- 8- Journal of Pharmacy and Pharmacology.
- 9- Drug Development and Industrial Pharmacy.
- 10- Pharmaceutical Development and Technology.
- 11- Journal of Drug Delivery.
- 12- Asian Journal of Pharmaceutical Sci.